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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,948	09/01/2000	J. Leighton Read	2719.2003-000	7877

7590

10/18/2002

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EXAMINER

PONNALURI, PADMASHRI

ART UNIT

PAPER NUMBER

1639

DATE MAILED: 10/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/654,948

Applicant(s)
Pirrung et al

Examiner
Padmashri Ponnaluri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 21, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 172-209 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 172-209 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 17 6) ☐ Other:

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DETAILED ACTION

1. The amendment D, filed on 6/21/02 has been fully considered and entered into the application.
2. The change of title of the application has been noted and entered.
3. Claims 172-209 are currently pending and are examined in this application.
4. The formal drawings filed on 10/9/01 have been fully considered and entered into the application.
5. The rejection of claims under 35 U. S. C. . 112, second paragraph have been withdrawn in view of applicants amendments to the claims.
6. The obviousness-type double patenting rejections over US Patents 5,405,783; and 5,384,261; and 6,329,143 have been withdrawn in view of applicants filing the terminal disclaimers.
7. Applicants arguments regarding the obviousness type double patenting of claims over US Patent 5,143,854 have been considered. In view of restriction of the method of preparing sequences on solid support, made in the 854 patent the rejections of record have been withdrawn.
8. Claims 172-184, 186, 188-192 are rejected under 112, first paragraph (written description) for the reasons set forth in the previous office action mailed on 12/18/01.
9. Claims 172-184, 186, 188-192 are rejected under 112, first paragraph (scope enablement) for the reasons set forth in the previous office action mailed on 12/18/01.

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10. The provisional obviousness-type double patenting rejection of claims 172-209 over US Patent application 08/563,759 has been maintained for the reasons of record set forth in the previous office action mailed on 12/18/01.

11. The obviousness-type double patenting rejection of claims 172-209 over US Patent 5,143,854 has been maintained for the reasons of record set forth in the previous office action mailed on 12/18/01.

Specification

12. The amendment C to the specification page 1, filed on 7/9/01 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Applicants by the amendment have incorporated by reference to many related applications, which would raise new matter issues.

The current application 09/654,948 is a continuation of 09/557,875 which is a continuation of 09/056,927, which would get the priority date of at least 07/624,114; and the 07/624,114 is a CIP of 07/362,901. Applicants by the preliminary amendment (after the filing date of this application) have entered the priority to the 07/492,462 which is a CIP of 07/362,901. The specification of 07/492,462 and 07/624,114 is not the same, and also by combining these two applications lot of different subject matter is introduced. For example the

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specification of the 07/624,114 is different and do not disclose specific method steps involved in the synthesis of a polymer array, such as radiation. Thus, the amendment is considered as introduction of new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

New Rejections necessitated by the Information disclosure

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 U. S. P. Q. 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 U. S. P. Q. 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 U. S. P. Q. 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 U. S. P. Q. 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CAR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CAR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CAR 3.73(b).

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14. Claims 172-209 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-54 of U.S. Patent No. 6,379,895 B1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the reference claims are drawn to a binary synthesis method for synthesizing a plurality of polypeptides, and the instant claims broadly recite a method of preparing an array of peptides and would read on the reference claims.

Response to Arguments

15. *The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.*

16. *Applicant's arguments filed on 6/21/02, regarding the written description and scope enablement rejections, have been fully considered but they are not persuasive.*

Applicants argue that the specification page 63, line 33 through page 64, line 6 of the specification, there is listing of activating agents other than light. Applicants arguments have been considered but are not persuasive, because the instant claims are drawn to a method of making polypeptide array on a substrate. The method uses selectively protecting and deprotecting steps of reagents on defined positions of a substrate. Even though the specification discloses other means of protecting and deprotecting reagents, the specification no where

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teaches "selective protection or deprotection of reagents on defined locations of the substrate" using any other means of agents useful in the method of synthesizing array of polypeptides.

The specification specifically teaches the use of photo lithographic techniques in the synthesis of polypeptide arrays. In addition the specification in page 10 teaches that 'by using lithographic techniques disclosed herein, it is possible to direct light to relatively small and precisely known locations on the substrate. It is, therefore, possible to synthesize polymers of a known chemical sequence at known locations on the substrate.' Thus, even though as applicants argue that the specification teaches other means for protecting or deprotecting, the specification nowhere teaches that these methods are used in the instant claimed method (i.e., synthesizing an array of polypeptide using the steps of selectively protecting and deprotecting of reagents on defined positions of a substrate. The specification nowhere teaches the use of other kinds of radiation (other than light), and the specific conditions (such as electrodes attached to the substrate so that electric energy is useful in protecting/deprotecting steps) required to use such kinds of radiation in the synthesis of an array of polymers on the solid substrate as claimed.

Applicants further argue that US Patent 6,379,895 teaches other activating agents. Applicants arguments have been considered, but are not persuasive because the US Patent applicants referring to (the '895 patent) is filed after the effective filing date of the instant effective filing date of the invention.

Applicants further argue that 'the use of activating agents other than light, along with appropriate protecting groups, for synthesis of a single peptide species on a solid support were

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well known in the art at the time of the invention.' Applicants arguments have been fully considered but are not persuasive. Because, the rejections of the instant claims is not based on synthesis of single peptides using activating agents other than light. It is well known in the art to synthesize individual peptides on solid supports using activating agents other than light. However, none of the prior art references (filed before the effective filing date of the instant invention) teach synthesis of polypeptide (more than one species peptide) arrays on solid supports and specifically neither of them teach selectively activating and deactivating defined locations of the substrate. Thus, applicants arguments have been considered but are not persuasive.

Applicants reference to figure 11 of US Patent 5,547,839 has been considered. However, it is not persuasive since the instant application which has a long list of parent applications some of which are continuation-in-part of applications. I.e., both the current application and the US patent application 07/626,730 (US Patent 5,547,839) share the same the grand, grand... Parent application 07/362,901. However the instant application claims priority of the CIP of 07/362,901 (that is 07/492,462) and not the 07/626,730. The patent 5,547,839 inventions are drawn to means to sequence hundreds, thousands or even millions of biological macromolecule and specifically Figure 11, of the '839 illustrates a functionalist apparatus for performing the scanning steps and sequencing reaction steps, which are not related to issues of the instant application claims. The rejections of record have been maintained.

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17. *Applicant's arguments filed on 6/21/01, regarding the provisional obviousness type-double patenting rejection over US Patent application 08/563,759 have been fully considered but are not persuasive.*

Applicants refer to MPEP, and state that the provisional double patenting rejection should be maintained until one of the application is issued as a patent, thereby converting the 'provisional' double patenting rejection in the other applications into a double patenting rejection at the time the one application issues as a patent. Applicants suggestions have been considered. Since 08/563,759 is allowed, applicants are requested to file a terminal disclaimer to overcome the rejection. The rejection is maintained for the reasons of record.

18. *Examiner acknowledges the list of related subject matter provided by applicants.*

19. *No claims are allowed.*

20. *The following is a statement of reasons for the indication of allowable subject matter:*

The method of synthesizing polypeptides on an area of surface of a substrate by generating a pattern of light and dark areas by selectively irradiating using photolithography techniques is not known in the prior art.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Ponnaluri whose telephone number is (703) 305-3884. The examiner is on *Increased Flex Schedule* and can normally be reached on Monday to Friday from 7.00 AM to 3.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang, can be reached on (703) 306-3217. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

P. Ponnaluri
Patent Examiner
Technology Center 1600
Art Unit 1627
16 September 2002


PADMASHRI PONNALURI
PRIMARY EXAMINER